Contents of Volume 13 1991

Number 1 1991

Newsline 1

Calendar 6

W.P. McNaughton, R.H. Richman, and R.I. Jaffee
"Superclean" 3.5NiCrMoV Turbine Rotor Steel: A Status Report—Part I: Steelmaking Practice, Heat Treatment, and Metallurgical Properties 9

W.P. McNaughton, R.H. Richman, and R.I. Jaffee
"Superclean" 3.5NiCrMoV Turbine Rotor Steel: A Status Report—Part II: Mechanical Properties 19

K. Upadhya
Thermodynamics and Kinetics of Simultaneous Reduction of Nickel Oxide by Iron and Carbon to Produce Ni—Fe Alloys 29

Y. Zheng, Y. Cai, L. Mo, and Z. Yang
Formation of Si-Containing Barrier in Al–Si Coatings and Its Effect on Protective Capability of Superalloy 39

P.J. Blau
Running-in: Art or Engineering? 47

L. Murugesh, S. Srinivasan, and R.O. Scattergood
Models and Material Properties for Erosion of Ceramics 55

A.T. Ibrahim, Y. Ballout, and J.E. Talia
An Attempt to Unify the Models Used for Ductile and Brittle Solid Particle Erosion 63

T.C. Kuo, P.K. Ghosh, and P.G. Kornreich
The Observation of Induced Stresses in Cadmium Telluride Films Grown on Si by Closed Hot Wall Epitaxy System 71

S.K. Putatunda
Stress Corrosion Crack Growth Behavior of a Low Alloy Steel in 3.0% NaCl Solution 77

Instructions to Authors on page iv

Indexed in *Current Contents*, *Metals Abstracts*, *Engineered Materials Abstracts*, and *World Aluminum Abstracts*

Number 2 1991
Special Issue: Magnetic Materials

Newsline 85

Calendar 90

Editorial 93

M. Sagawa
Review of Sintering Process Development for Nd–Fe–B 95

L.C. Pereira, J.G. de Blas, O. Acselrad, F.L. Bastian, F.G.A. Filho, J.A.S. Filho, W. Cesar, J.O. Mahtuk, and A.L.F. Silva
Development of Controlled Rolled High Strength Nb and Nb–V Strip Steels for X70 ERW Pipes 103

Y. Ushigami, Y. Suga, N. Takahashi, K. Kawasaki, Y. Chikaura, and H. Kii
Dynamic Study of Secondary Recrystallization of 3% Si–Fe by Synchrotron X-Radiation Topography 113

V.R.V. Ramanan
Metallic Glasses in Distribution Transformer Applications: An Update 119

V. Panchanathan
Developments in Rapidly Solidified Nd–Fe–B Permanent Magnets 129

M. Tsuzaki, K. Takaki, F. Yoshikawa, M. Nakamura, and T. Kuriyama
Production Processes of Iron Oxides for Soft Ferrites 135

M.J. Shah and J.G. Vaidya
Permanent Magnets for Self-Regulating Generators 141

M. Kurosawa, K. Sato, M. Komatsubara, and B. Fukuda
Effect of Crystal Orientation on the Iron Loss and Magnetostriction in Domain Refined Highly Grain Oriented Si Steel Sheets 145

A. Boglietti, P. Ferraris, M. Lazzari, and F. Profumo
Design and Realization of Amorphous Material Transformers 151

O. Tanaka, H. Kobayashi, and E. Minematsu
New Insulating Coating for Grain Oriented Electrical Steel 161

Instructions to Authors on page iv

Indexed in *Current Contents, Metals Abstracts, Engineered Materials Abstracts,* and *World Aluminum Abstracts*

Number 3 1991

Newsline 169

Calendar 173

A.S. Kim and F.E. Camp
Improved Corrosion Resistance of Nd–Fe–B Magnets 175

S. Choudhury and E.I. Meletis
The Effect of Fiber Volume Fraction on the Properties of Al–α-Al_2O_3 Metal Matrix Composites 183

K.H. Kim, C.H. Ho, T.-G. Suh, S. Prakash, and R.F. Bunshah
Ultrafine Aluminum Oxide Powder Prepared by Chemical Vapor Desposition of Trimethylaluminum 199

X. Zhu and J.G. Byrne
Effect of Interface Defects on the Mechanical Properties of Autogenous Diffusion Bonded Joints 207

B.N. De, N.J. Ianno, P.G. Snyder, J.A. Woollam, and J.J. Pouch
Coloration of Glass Exposed to Atomic Oxygen 213

I.G. Brown, M.R. Dickinson, J.E. Galvin, X. Godechot, and R.A. MacGill
Some Novel Surface Modification Applications of a New Kind of High Current Metal Ion Implantation Facility 217

A. Sengupta, A. Spis, and S.K. Putatunda
The Effect of Overload on Corrosion Fatigue Crack Growth Behavior of a Low Alloy Steel in Threshold Region 229

S. Kumar, G.S. Upadhyaya, and M.L. Vaidya
Sintering of Lead Bronze Containing Tin 237

Instructions to Authors on page vi

Indexed in *Current Contents, Metals Abstracts, Engineered Materials Abstracts,* and *World Aluminum Abstracts*

Number 4 1991

Announcement 243

Newsline 245

Calendar 250

D.E. Morel
Reaction Kinetics in Continuous Silicon Carbide Reinforced Titanium 15V–3Cr–3Al–3Sn 251

J.D. Whittenberger
Properties of Pure Nickel after Long Term Exposures to LiOH and Vacuum at 775 K 257

L. Shi, J. Chen, and D.O. Northwood
Inclusion Control in a 16 Mn Steel Using a Combined Rare Earth and Calcium Treatment 273

J.M. Pelletier, S. Jobez, Q. Saif, P. Kirat, and A.B. Vannes
Laser Surface Alloying: Mechanism of Formation and Improvement of Surface Properties 281

V.J. Gadgil, A.G.B.M. Sasse, J.J. Swens, and B.H. Kolster
Effect of Cooling Rate on the Austenite–Ferrite Phase Boundary Composition of a Duplex Stainless Steel 291

T. Araya and T. Umino
Present Status of CO_2 Laser Processing 299

Z.F. Zhou and D.Q. Sun
Welding Consumable Research for Compacted Graphite Cast Iron 307

Index to Volume 13 315

Instructions to Authors on page iv

Indexed in *Current Contents, Metals Abstracts, Engineered Materials Abstracts,* and *World Aluminum Abstracts*